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EXAMINER

HIRIYANNA, KELAGINAMANE T

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## DETAILED ACTION

Applicant's response filed on 05/08/2008 in response to office action mailed on 01/08/2008 has been acknowledged.

Claims 1-9, 12-178, 180, and 183-186 were previously cancelled.

Claims 10-11, 181 and 189 are amended.

Claims 197-209 are new.

Claims 10-11, 179, 181-182 and 187-209 are pending and are examined in this office action.

Applicants are required to follow Amendment Practice under revised 37 CFR §1.121. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The references cited herein are of record in a prior Office action.

### **Claim Objections**

Claims 10, 11, 189, and 209 recite "FGF19" while claims 179 and 190 recite "FGF-19". This use of alternative terminology is objected-to. The Applicant is required to amend all recitations to be self-consistent.

### **Claim Rejections - 35 USC § 112 (2<sup>nd</sup> paragraph)**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10, 11, 181, 282, 189 and 209 and their dependent claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10, 11, 181,189 and 209 are indefinite as they recite " the control...transgenic mouse" as a control for a testing carried out on " a transgenic mouse" which makes the claims indefinite. If the Applicant is referring to the same transgenic mouse the applicant then should describe the appropriate conditions under which said transgenic mouse acts as a control (conditions under which it is a control for the tested one of the same kind). For example " said transgenic mouse that is untreated with said compound etc., acts as a control".

**Claim Rejections - 35 USC § 112 (1<sup>st</sup> paragraph)**

Claims 10, 11, 189 and their dependent claims 179, 181-182, 187-209 stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a FGF19 transgenic mouse wherein said transgene is expressed under the control of a promoter in a skeletal muscle cell and wherein said transgenic mouse has a phenotype of developing Hepatocellular carcinoma (HCC), is not enabled for a HCC mouse wherein the FGF19 gene is not expressed or expressed under any cell or tissue. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The scope of instant invention encompasses obtaining a transgenic mouse with a phenotype of hepatocellular carcinoma (HCC) by introducing a FGF19 transgene under the control of a promoter in any tissue or cell-type. However, the specification only provides guidance and/or evidences regarding generation of a transgenic mouse with a phenotype of HCC owing to FGF19 cDNA expression driven by a MLC promoter in a skeletal muscle, its further characterization (Example 8, p.91-95) and a method of drug screening (p.96, 3<sup>rd</sup> paragraph bridging p.97-98) using said HCC mouse. The application does not disclose any other transgenic animals/mice with hepatocellular carcinoma phenotype wherein a FGF19 transgene was expressed in tissues or cell types other than the single example of skeletal muscle.

**Response to Applicant's arguments in of 05/08/2008:**

The Applicant amends the claims and argues that the use of any gene promoter that is linked to the FGF-19 transgene should be able to induce HCC in mouse irrespective of whether the transgene is expressed or expressed at any level. Applicant further provides as examples from the art, the expression of a growth hormone gene in a transgenic animal under distinct promoters such as H2K promoter, transferring gene promoter, metallothionein gene promoter etc have resulted in the expression of the growth hormone gene.

The Applicant's arguments are however, found not fully persuasive. In the first place the applicant does not amend the claims to indicate that the FGF-19 gene is expressed or its expression is strictly needed for the induction of said HCC phenotype in mouse. Further, the Applicant's arguments taken from the art regarding expression of an unrelated gene (growth hormone) using distinct promoters would not suffice. The Applicant should file a declaration regarding the same indicating that the use of any promoter linked to FGF19 transgene would result in a mouse with a phenotype of Hepatocellular carcinoma (HCC). Since the specification fails to disclose other broadly claimed gene promoters that were used for driving FGF19 transgene expression in deriving a mouse with hepatocellular carcinoma, it is unclear how one skilled in the art could use the invention as claimed given the unpredictability in the art regarding use of any promoter in generating a cancer phenotype in a mouse for the reasons of record set forth in the previous office action. Hence the rejection is maintained.

### **Conclusion**

No claim allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1633

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Kelaginamane Hiriyanne Ph.D., whose telephone number is (571) 272-3307. The examiner can normally be reached Monday through Friday from 9 AM-5PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Woitach Ph.D., may be reached at (571) 272-0739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). When calling please have your application serial number or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. For all other customer support, please call the USPTO call center (UCC) at (800) 786-9199.

Kelaginamane T. Hiriyanne

Patent Examiner

Art Unit 1633

***/Robert M Kelly/******Primary Examiner, Art Unit 1633***